

STUDIES IN AUSTRALIAN ENTOMOLOGY.

NO. XV. NEW GENERA AND SPECIES OF CARABIDÆ, WITH SOME NOTES ON SYNONYMY (CLIVININI, SCARITINI, CUNIPECTINI, TRIGONOTOMINI AND LEBIINI).

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(Continued from Vol. xxix., 1904, p.538.)

BIPARTITI.

A character which differentiates the two tribes of the Bipartiti (as represented in the Australian fauna), but which has not been noticed, is the seta near the tip of the basal joint of the antennæ on the upper side; this is present in all Australian species of the Clivinini, but absent in all our representatives of the Scaritini. My data are not sufficient to enable me to report on this feature in the faunas of other parts of the world, but the species of *Scarites* which I have examined have had no trace of this seta.

Only once have I seen a member of the tribe Scaritini in which this seta was present; viz., one specimen of *Scaraphites lenæus* Westw., (a species in which the seta is normally wanting). This seems a case of atavistic reversion, suggesting that the Scaritini are descended from a stock in which the seta was present, and so strengthening my impression that the present day Scaritini are less ancient than the Clivinini.

Tribe CLIVININI.

Genus CLIVINA.

CLIVINA BANKSI, n.sp.

Elongate. Head wide before the eyes; elytra strongly punctate-striate, fourth stria joining fifth at base, interstices greatly raised near base, eighth carinate near base, narrow and carinate on apical curve; anterior tibiæ strongly 3-dentate, paronychium

long, obtuse; prosternal episterna almost lævigata (hardly substriolate and subrugulose anteriorly); peduncle with lateral cavities impunctate. Black (elytra sometimes with an obscure ferruginous stripe on apical curve above eighth interstice), legs ferruginous.

Head smooth between facial carinæ, a few punctures on each side near posterior extremity of facial carina; clypeus with median part lightly emarginate, strongly bordered, "wings" not divided from median part, rounded externally, lightly concave, rugulose; supra-antennal plates wide, rounded and bordered externally, decidedly divided from "wings" of clypeus. Prothorax convex, lævigata, a little longer than broad (2.55×2.4 mm.), widest a little before posterior angles, decidedly narrowed anteriorly (1.9 mm.); anterior line deep; median line well marked. Elytra convex, widest a little behind middle (5.3×2.7 mm.); base truncate; striæ very deep anteriorly, shallow—but marked—posteriorly; interstices convex, very strongly so towards base. Prosternum with intercoxal part wide anteriorly, transversely sulcate on posterior declivity. Length 10, breadth 2.7 mm.

Hab.—Q.: Normanby River, 40 miles south-west from Cooktown (Sloane; two specimens on the river-bank; June, 1906); Cooktown (Olive; Coll. Sloane).

Though so closely resembling *C. australasie* Bohem., that it might be taken for that species at the first glance, it is really more allied to *C. leai* Sl., from which it is at once differentiated by its much larger size, elytra not with the whole apical fourth reddish, etc. From *C. australasie* it differs (apart from its less opaque black colour) by its almost smooth prosternal episterna; peduncle with lateral cavities impunctate; anterior tibiæ with fourth (upper) tooth obsolete, paronychium longer, obtuse at apex; head smoother, much less punctate on gulæ; elytra with interstices much more raised near base; wide basal part of inflexed margin without a longitudinal punctate stria, etc.

CLIVINA PLANIFRONS, n.sp.

Convex, parallel; head depressed, clypeus emarginate as in *C. australasie* (but a little more deeply so); elytra with fourth stria

joining fifth at base; prosternum as in *C. australasica* (but episterna not perceptibly transversely striolate); anterior femora short, wide, with lower side rounded and bordered on posterior margin; anterior tibiæ strongly 4-dentate. Head, prothorax, and anterior legs piceous-red; elytra piceous-black; body piceous beneath; four posterior legs testaceous.

Head with vertex and front flat, this depressed area extending on each side to eyes and backwards in a curve behind level of eyes; front without the usual facial carina on each side near eyes. Prothorax lævigata, convex, quadrate (2.2×2.25 mm.), very little narrowed to apex; median and anterior lines well marked. Elytra a little wider than prothorax (4.75×2.5 mm), parallel on sides, widely rounded at apex; base truncate; striæ not deep, punctulate, seventh not interrupted posteriorly; interstices lightly convex. Length 6.5-8.5, breadth 1.75-2.5 mm.

Hab.—Q.: Brisbane (Hacker; Colls. Hacker and Sloane).

This species was sent to me by Mr. Henry Hacker ticketed "Brisbane." It is allied to *C. cava* Putz., which is the only Australian species with which it can be confused, but it differs from *C. cava* by colour; head more depressed, the depressed area occupying all the space between the eyes, so that the supraorbital setæ rise under its lateral edge, and the facial carinæ become altogether lost (in *C. cava* the facial carinæ are well developed and distinct).

CLIVINA HACKERI, n.sp.

Robust, oval; head small; prothorax subtrapezoid, narrowed anteriorly; elytra convex, shortly oval; metasternum small, hardly more than half the length of posterior coxæ between intermediate and posterior coxæ; peduncle with lateral concavities small, smooth; legs short, stout, anterior tibiæ strongly 3-dentate with a slight protuberance above upper tooth.

Head as in *C. nyctosyloides* Putz.; clypeus with median part truncate, the "wings" lightly advanced beyond median part, gently oblique on inner side; mandibles short, stout; labrum short, 7-setose. Mentum large; lobes wide, obtuse, oblique on

inner side; sinus shallow; a very wide, prominent, roundly obtuse, median process in sinus. Antennæ stout; second joint longer than third; joints 4-11 moniliform, compressed. Prothorax convex, transverse (2.8×3.5 mm.), widest just before posterior angles, greatly narrowed to apex (2.1 mm.); sides oblique; apex emarginate; anterior angles widely obtuse, subprominent; posterior angles obtuse but marked; basal curve short; border narrow, entire on basal curve; anterior line well marked near anterior margin; median line distinct. Elytra short, oval (6×4 mm.), very convex, deeply but roundly declivous to peduncle; shoulders quite rounded off; striæ strongly impressed, finely punctate at bottom, seventh as strongly impressed as others and continuous to apex; interstices convex, first with a very short striole at base, third 4-punctate, eighth entire, wide and convex on apical curve; lateral channel closely catenulate (with punctate tubercles) at bottom. Prosternum with intercoxal part wide, shortly channelled between coxæ; posterior declivity transversely impressed, but not sulcate. Tarsi short, anterior with first joint as long as four succeeding joints together; intermediate tibiæ stout, incrassate, outer edge denticulate, external spur stout, long, placed a little above apex, another short spur a little above it. Length 11, breadth 4 mm.

Hab.—Q.: Coen (Colls. Hacker and Sloane).

A very distinct species without any close relationship to any other Australian species. Its short broad form, with short oval elytra (not truncate at base) distinguish it from all our species. It is one of a few species with short metasternal episterna; probably it may be placed near *C. nyctosyloides* Putz., which it resembles generally in form of head, prothorax, and peduncle, but it is very distinct by its smaller metasternum with shorter episterna; elytra not truncate on base, eighth interstice distinct from seventh and hardly reduced in width near apex. It has the elytra soldered together and the underwings reduced to a mere narrow membrane, characters which seem to differentiate it from all other species of the genus. Mr. Henry Hacker informed me that he obtained only three specimens one morning

(18th Jan., 1906) after rain, crossing a track in open forest land; from this it would appear that it is not a riparian species like the typical species of *Clivina*.

Tribe SCARITINI.

Genus SCARAPHITES.

SCARAPHITES HIRTIPES Macleay.

By a vexatious error in my Check-List of the Australian Carabidæ, Pt. i. (1905), *Sc. hirtipes* Macl., has been placed as a synonym of *Sc. latipennis* Macl. The differences between these species and their synonymy have been dealt with by me in these Proceedings (1905, pp. 111 and 112), and I still hold the views there expressed.

SCARAPHITES LENÆUS Westwood.

Since dealing with *Sc. lenæus* Westwood, in these Proceedings (1905, p. 111), I have received from Mr. J. A. Kershaw of Melbourne, a specimen ticketed *Scaraphites martini* Cast., which agrees more closely with Westwood's figure than the specimen of *Sc. latipennis* Macl., which I formerly identified as *Sc. lenæus*. Mr. Kershaw's specimen has the prothorax with the sides more strongly sinuate posteriorly, and the basal angles far more strongly marked than in Mr. Lea's specimen (in which these features are feebly developed); thereby showing a stronger resemblance to Westwood's figure, though to me both specimens seem forms of one species—this suggests that *Sc. latipennis* Macl., from King George's Sound, is probably a slightly differentiated form or variety of *Sc. lenæus*, the typical form being from the West Coast. The ticket on Mr. Kershaw's specimen is an old one, and seems to offer a clue to the identity of *Sc. martini* Cast., with *Sc. lenæus* Westw., rather than with *Sc. silenus* Westw., as conjectured by me (these Proceedings, 1905, p. 111).

Genus EURYSCAPHUS.

In these Proceedings (1905, p. 113) I have said that the type of *Euryscaphus carbonarius* Cast., is no longer in existence.

Mr. J. A. Kershaw informs me, however, that there is a specimen (which I must have overlooked) in the Howitt Collection—at present in his charge—ticketed *Scaraphites carbonarius* Cast. It is to be hoped the vexed question of the identity of this species may be settled authoritatively sooner or later by an examination of the type.

Genus LACCOSCAPHUS.

LACCOSCAPHUS QUADRISERIATUS, n.sp.

Elliptical-oval, robust, convex; head with two supraorbital punctures on each side; each elytron with four rows of deep foveæ; anterior tibiæ 3-dentate. Black, margin of prothorax and elytra and bottoms of elytral foveæ cupreous.

Head transverse-quadrate (4.9 mm across eyes); frontal sulci hardly divergent backwards, connected behind by a rounded impression; three subequal frontal spaces clearly defined from occiput; eyes small, lightly convex, not prominent. Prothorax convex, transverse (4.25 × 6.3 mm.); sides subparallel, rounded at posterior angles, lightly sinuate on each side of the wide basal lobe; anterior angles roundly obtuse, a little advanced but not prominent; border thick, reflexed, a little narrower on sides than on each side of basal curve, not reflexed in middle of basal lobe; median line distinct; a transverse line defining basal area; a wide shallow rounded impression before each side of basal lobe; four marginal punctures on each side, anterior puncture just behind anterior angle. Elytra convex, ovate (10 × 6.3 mm.), widest behind middle, a little narrowed to base; sides slightly rounded; base lightly truncate-emarginate behind lobe of prothorax; four rows of large deep foveæ on each elytron, and a row of ocellate punctures placed in foveiform depressions along sides; border reflexed, upturned (but roundly obtuse) at humeral angles. Length 18.5, breadth 6.3 mm.

Hab.—Australia (type in Coll. Deutsche Entomologische National Museum, Berlin).

In these Proceedings (1905, p.116) I have given a synoptic table of the species of *Laccoscaphus*, following which the position

of *L. quadriseriatus* would be next to *L. foveigerus* Chaud. The described species of *Laccoscaphus* with four rows of foveæ on each elytron and the lateral ocellate pores placed in foveiform depressions are *L. foveigerus* Chaud., *L. quadriseriatus* Macl., *L. lacunosus* Macl., and *L. macleayi* Sl.; these species are all so closely allied to one another that it seems probable they are colour-varieties of one variable and widely distributed species rather than distinct species. *L. quadriseriatus* differs from all the species mentioned above by the margins of the pronotum and elytra and the bottoms of the elytral foveæ being cupreous; size larger; form more convex; prothorax with anterior angles more obtuse and less prominent, sides more decidedly rounded to anterior angles, base less strongly sinuate on each side—owing to the basal lobe being less developed; elytra more convex, with more numerous foveæ in all the rows. *L. quadriseriatus* is the same size as *L. spencei* Westw., from which it differs by colour, the presence of a juxtasutural row of foveæ on the elytra, &c. A single specimen was sent to me by Herr Sigismund Schenkling, ticketed "New Holland"; I should expect its habitat to be tropical Australia.

Genus CARENUM.

CARENUM FORMOSUM, n.sp.

Elliptical-oval, lævigata; head convex, frontal sulci parallel, suborbital channel single, lower edge forming a ridge; prothorax convex, transverse, lobate, anterior angles strongly advanced, lateral margins wide, bipunctate; elytra ovate, convex, bipunctate towards apex; anterior tibiæ 3-dentate, posterior tibiæ slender. Head black with a faint violaceous tinge posteriorly above and below; prothorax widely margined with green (including anterior margin), disc deep purple-black; elytra violet with green reflections, becoming green near margins; inflexed margin of prothorax and elytra green; prosternum black with episterna viridescent; body black; mes- and metepisterna and ventral segments laterally viridescent; legs, antennæ and palpi black, antennæ on sides of apical joints and apex of palpi reddish-piceous.

Head transverse (4·3 mm. across eyes); anterior margin truncate between intermediate angles, arcuate outside intermediate angles; frontal sulci parallel, not deep; preocular sulcus lightly marked; preocular process small, rounded; eyes reniform, lightly convex. Prothorax transverse (3·2 × 5·7 mm.), much wider than head, convex, declivous to base; sides lightly rounded; posterior angles rounded off; anterior angles strongly advanced, roundly obtuse; basal lobe well developed, rounded; a strong sinuosity on each side of basal lobe; border widely reflexed, most strongly so at posterior angles; marginal channel wide; median line lightly marked. Elytra ovate (7·7 × 5·5 mm.), lightly rounded on sides; base obliquely declivous, punctate; lateral channel wide; border reflexed, strongly upturned at humeral angles; a row of closely placed ocellate punctures along lateral margins. Prosternum with intercoxal part lightly and widely channelled, truncate at base; two marginal punctures on each side. Legs light; anterior femora not swollen in middle; anterior tibiæ with upper external tooth very small, surmounted by two small denticulations. Length 15·5, breadth 5·7 mm.

Hab.—N.W. Australia: Carnot Bay (type Coll. Sloane).

I owe this species to the kindness of Mr. C. French; it belongs to the *C. smaragdulum* group and is allied to *C. virescens* Sl., but differs by smaller size; lighter form; eyes more convex, more lightly inclosed in smaller orbits posteriorly; lateral channel much narrower at sinuosities on each side of prothoracic basal lobe (border not reflexed at these sinuosities); elytra narrower, and less rounded on sides, disc of a beautiful metallic-blue colour. In general appearance it closely resembles *C. froggatti* Sl., but differs decidedly by head wider, more convex, anterior angles less prominent, anterior margin not sloping forward on each side to summit of intermediate angles, frontal sulci parallel, eyes less prominent; prothorax more transverse; elytral margin wider; prosternum with intercoxal part not deeply longitudinally channelled.

CARENUM RUTILANS, n.sp.

Elongate-oval, convex, lævigata; head with frontal sulci strongly divergent posteriorly, two supraorbital setigerous punctures on each side; prothorax with posterior angles rounded, base lobate, marginal channel narrow, 2-punctate; elytra oval, 2-punctate on apical third; anterior tibiæ 3-dentate. Pronotum and elytra nitid-green with purple tints on discal parts in some lights; inflexed margins of elytra green; head black, occiput virescent on each side at posterior extremity of frontal sulci, under-surface with purple tints behind mentum; prosternum nigro-virescent; body black, mes- and metepisterna virescent; legs black, tarsi and antennæ piceous, palpi reddish-piceous.

Head large (3.5 mm. across eyes), convex, smooth; anterior margin with intermediate angles small, triangular, arcuate outside intermediate angles; clypeus truncate and declivous between intermediate angles; frontal sulci deep, strongly divergent and defining lateral frontal spaces posteriorly; preocular sulcus short, distinct; preocular process small, rounded externally; supra-orbital sulcus not extending downwards behind eyes to join suborbital channel; eyes convex, prominent; orbits not prominent behind eyes. Prothorax not much wider than head (2.75 × 4 mm.), evenly convex, roundly and strongly declivous to base; sides hardly rounded in middle, very lightly narrowed to anterior angles, widely and evenly rounded posteriorly; anterior angles a little advanced, obtuse; basal lobe strongly developed, rounded; border narrow, reflexed, sharply sinuate on each side of basal lobe, thicker on basal lobe; marginal channel narrow, a little wider round posterior angles; median line narrow. Elytra oval (6.3 × 4.25 mm.), convex, evenly rounded on sides; base strongly declivous to peduncle; margin explanate at apex; border roundly reflexed, prominent at humeral angles; inflexed margin wide, widely vertical at apex; a row of closely placed ocellate punctures along sides; basal declivity punctate. Length 12.5, breadth 4.25 mm.

Hab.—Central Australia: Tennant's Creek (unique; Coll. French).

Belongs to the *C. smaragdulum* group; by its head with two supraorbital punctures it shows an affinity to *C. odewahni* Cast., and *C. distinctum* Macl., but it is at once differentiated from these species by the prothorax with only two lateral setæ, in this resembling *C. froggatti** Sl., to which, however, it has no close affinity, differing by its very widely securiform apical joint of the labial palpi, prothorax with marginal channel and border not wide, &c.

CARENUM MOROSUM, n.sp.

Elongate-oval, convex, levigate; head with one supraorbital seta on each side; prothorax transverse, lateral margins without setigerous punctures, base sinuately subtruncate without median lobe; elytra cordate, impunctate on disc and on basal declivity; anterior tibiæ 2-dentate, intermediate tibiæ stout, incrassate, with a well marked spiniform spur at outer apical angle. Black.

Head large, convex (6 mm. across eyes); frontal sulci deep, subparallel, reaching back as far as base of eyes; eyes rather prominent, strongly inclosed in orbits at base. Prothorax transverse (5 × 7 mm.), convex; sides lightly rounded, subparallel in middle, very lightly narrowed to anterior angles, these prominent, obtuse, more strongly narrowed to posterior angles, these rounded but marked; border strongly reflexed, narrow on middle of sides, much wider near anterior angles, widely explanate at posterior angles, widely subsinuate on each side of base behind posterior angles, narrowed and emarginate on middle of base; median line deeply impressed; a well marked foveiform impression on each side of base about half-way between posterior and median line. Elytra hardly wider than prothorax (9.6 × 7.2 mm.); base widely emarginate, truncate; sides gently narrowed to apex; border reflexed, strongly so towards base, upturned at humeral angles; lateral channel wide behind humeral angles; lateral ocellate punctures widely placed (about twelve on each side).

* In the original description of *C. froggatti* the anterior tibiæ are twice mentioned, the first time erroneously as bidentate; they are tridentate.—T.G.S.

Prosternum with intercoxal part longitudinally channelled and with one setigerous puncture on each side. Posterior coxæ with one setigerous puncture; posterior trochanters with a setigerous puncture on inner side near base. Length 19·5, breadth 7·2 mm.

Hab.—Victoria: Grampian Mountains (unique; Coll. French).

Belongs to the *C. lævipenne* group,* which includes *C. lævipenne* Macl., *C. ineditum* Macl., (I have doubts as to the distinctness of these two species), *C. cordipenne* Sl. (remarkable for having the paragenæ setigero-punctate beneath suborbital scrobe), and *C. politulum*† Westw. *C. morosum* is allied to *C. lævipenne*, but differs by colour wholly black; prothorax more parallel on sides, much more lightly narrowed to anterior angles, posterior angles more prominent and marked, border much more widely reflexed; base of elytra without ocellate punctures near humeral angles; intermediate tibiæ stouter and with a more decided spine at outer apical angle. It is remarkable to find in *C. morosum* the basal declivity absolutely without punctures; another black Victorian species, viz., *C. amplipenne* Sl., has only one puncture on each side, and *C. lepidum* Sl., has sometimes the base with one puncture, sometimes with none; *C. lepidum* has no affinity to *C. morosum* and *C. amplipenne*, and these two latter species differ decidedly from one another.

Genus CARENIDIUM.

CARENIDIUM LONGIPEÑNE, n.sp.

Elongate, depressed, lævigata. Labrum deeply emarginate; prothorax very little broader than long, two marginal setigerous punctures on each side; elytra long, narrow, impunctate, strongly bimucronate at apex, border not dentate at humeral angles;

* Cf. these Proceedings, 1900, p. 366.

† I believe from Westwood's figure of *C. politulum* that it exactly resembles *C. lævigatum* Macl., in form of legs, shape of prothorax and colour; in fact, I have always inclined to think Westwood's description was founded on a form conspecific with *C. lævigatum*, in which the two discal elytral punctures were absent.

anterior tibiæ bidentate. Black, prothorax and elytra widely margined with green.

Head 5.2 mm. across eyes, subdepressed, smooth; frontal sulci long, deep, diverging backwards, anterior part turning outwards in a light linear course; clypeus with median part emarginate, declivous, intermediate angles strong, dentiform; eyes convex, not prominent; orbits large, rising gently from sides of head, as prominent as and enclosing eyes; two supraorbital punctures on each side. Prothorax a little broader than long (5 × 5.5 mm.) depressed on disc, not declivous to base in middle; sides subparallel; narrowed gently anteriorly before marginal seta, widely rounded at posterior angles, lightly sinuate on each side of base; anterior margin truncate; border narrow, hardly produced at anterior angles, stronger and continuous between posterior marginal setæ. Elytra hardly as wide as prothorax, elongate-parallel-oval (12 × 5.4 mm.), lightly depressed towards base; strongly and subobliquely declivous on sides; humeral angles rounded; base truncate; each elytron terminating in a strong cylindrical sharply pointed mucro; a row of separate punctures along sides; four punctures on base of each elytron. Ventral segments 3-5 bipunctate; apical segment with reflexed edge foveate on each side of apex. Legs light; posterior coxæ and trochanters impunctate. Length 23.5, breadth 5.5 mm.

Hab.—W.A.: Norseman (W. A. Sayer; Coll. French; unique).

This species is characterised by its long narrow parallel form; it belongs to the *C. mucronatum* group, in which the elytra are bimucronate at the apex. From *C. mucronatum* Macl., it is at once distinguished by its smaller size, much more narrow and elongate form, longer apical mucrones, &c. It is more allied to *C. leai* Sl. (the other species of the group), with the description of which it agrees in the general characters of head and prothorax, but from which it is evidently distinct by its more slender form; elytra with margins of depressed discoidal area not "sharply defined" nor ending in a subtuberculate elevation on each side. The apical declivity slopes evenly to the long pointed apical mucrones, and the disc is only depressed (slightly) on the anterior half.

Tribe CUNEIPECTINI, n.trib.

Head not narrowed behind eyes, one supraorbital seta on each side; eyes round, distant from buccal fissure, not inclosed at base. Antennæ with three basal joints glabrous. Mentum deeply emarginate, toothed. Prothorax widely margined; posterior marginal seta on explanate border just before basal angle. Elytra not bordered on base, strongly punctate-striate, dorsal interstices without setigerous punctures; margin decidedly interrupted posteriorly and with a strong internal plica. Prosternum with intercoxal part shortly prolonged backwards in a wedge-shaped process. Mesosternum wide and deeply excavate between intermediate coxæ; epimera not attaining coxæ. Metasternum and first ventral segment meeting and rather widely dividing posterior coxæ; episterna short, wide. Ventral segments 4-6 with a strongly defined and wide raised margin or "collar" along anterior margin. Legs stout; tibiæ wide at apex, anterior emarginate on inner side towards apex, inner spur above emargination; posterior coxæ 3-setose.

I would place the tribe Cuneiptectini at the beginning of the Trigonotomid series of the subfamily Harpalinæ.

CUNEIPECTUS, n.gen.

Head stout, convex, not narrowed behind eyes; one supraorbital seta opposite middle of eye on each side. *Antennæ* setaceous, short, reaching to base of prothorax; three basal joints glabrous, first stout, not long (1 mm.), second shortest (0.65 mm.), third longest (1.4 mm.). *Labrum* large, subquadrate; a longitudinal median line from base to near apex; anterior margin lightly emarginate in middle and rounded on each side. *Clypeus* large; anterior margin widely subemarginate, a strong puncture near each anterior angle. *Mandibles* stout, not long, without a seta in outer scrobe. *Mentum* deeply excavate, with broad prominent median tooth; sinus with sides parallel. *Palpi* stout: *labial* with penultimate joint a little longer than apical, 2-setose in front; apical joint club-shaped, shortly and roundly angustate-truncate: *maxillary* long; second joint longest (1 mm.); two

apical joints shorter (0·7 mm.), equal; apical truncate. *Maxillæ* with outer lobe longer than inner, 2-articulate; inner lobe stout, hooked at apex, inner side closely beset with bristles. *Ligula* short, corneous, with two widely placed setæ at apex. *Prothorax* transverse; three or four widely placed setæ along lateral margins, the posterior seta near edge of explanate margin just before basal angles. *Elytra* widely oval, strongly punctate-striate, not bordered at base; margin interrupted and with an internal plica near apex; a short striole at base of first interstice. *Body* subpedunculate; scutellum wide. *Abdomen* with a strongly raised wide border along anterior margin of segments 4-6; first segment meeting metasternum and dividing posterior coxæ. *Prosternum* with intercoxal part wedge-shaped; posterior declivity narrow, vertical. *Mesosternum* with intercoxal declivity deeply excavate, a strong keel-like ridge on each side. *Legs* stout; tibiæ wide at apex, anterior with inner side emarginate before apex, inner spur above emargination; tarsi of moderate length, fifth joint setulose beneath.

CUNEIPECTUS FRENCHI, n.sp.

Robust, wide, oval, glabrous; black. *Prothorax* transverse (6 × 9·3 mm.); apex truncate behind head; anterior angles shortly advanced, wide, roundly obtuse; sides rounded, more gently narrowed to base than to apex; base wide, truncate across peduncle; basal angles produced shortly backwards, obtuse; disc convex, canaliculate, transversely striolate; posterior marginal seta on border near edge at a little distance (1 mm.) from basal angle; border wide with edge thick, produced at anterior and basal angles. *Elytra* wide, oval (19 × 12·6 mm.); shoulders rounded off; apex wide, strongly sinuate on each side; disc wide, subdepressed, hardly declivous to base behind scutellum, but strongly so on each side of base; striæ deep, coarsely punctate; interstices wide, lightly convex, seventh more raised, subcostiform, forming outer margin of disc; space between summit of eighth interstice and lateral border depressed, rugose-punctate. Length 29, breadth 12·6 mm.

Hab.—W.A.: Norseman District (Coll. French; unique).

There is a row of closely placed deep punctures near the lateral border of the elytra, but these are not the normal setigerous punctures of the ninth interstice; the latter are very small, but may be noticed by a careful inspection about the middle of the lateral depression.

The facies of this strange insect, for which I have not only founded a new genus, but have also felt compelled to propose a new tribe, is almost that of a true *Carabus*, and is very unlike that of any other Australian carab. Most of its characters show an affinity to the Trigonotomini, but it seems also to have some remote affinities towards the *Broscini*, *Chlœniini* and *Panageini*. It is evidently an ancient and generalised form such as might have been expected to be still in existence in Australia.

Tribe TRIGONOTOMINI.

Castelnau, Etudes Entomologiques, 1834, p.75.

Under the law of priority, which acts in the same manner for higher groups as it does for genera and species, the tribal name Trigonotomini must be given preference over Pterostichini (Erichson, 1837) and Platysmatini (Tschitschérine, 1899).

Genus CASTELNAUDIA.

CASTELNAUDIA sp., Tschitschérine.

Trichosternus opacipennis Tschitschérine, Hor. Soc. Ent. Ross. xxxv., 1902, p. 528 (not *Homalosoma opacipenne* Macleay).

There can be no doubt but that the late M. Tschitschérine mistook another species for *Homalosoma opacipenne* Macl.; it would have been impossible for a specialist holding the views he did on taxonomy to have placed that species in the genus *Trichosternus*. One has only to take note of his statement in regard to the species he had before him, "tête et pronotum luisants," to be convinced that it was not *H. opacipenne* Macl., which has only the head nitid, the pronotum being opaque.

Tschitschérine's species is sufficiently described to be identified. It is unknown to me in nature; and "a specific name which undoubtedly rests upon an error of identification can not be retained for the misdetermined species even if the species in question are

afterwards placed in different genera" (Art.31, Internat. Rules Zool. Nomencl.). Tschitschérine gives the dimensions as length 25, prothorax 5.25×7 , elytra 13×8.5 mm. His notes indicate that it is closely allied to *C. wilsoni* Casteln., from which it differs by its colour wholly black.

Genus NOTONOMUS.

NOTONOMUS CARTERI, n.sp.

Oval, robust. Head small (2.5 mm. across eyes); prothorax subcordate, basal angles obtuse, marked, posterior marginal seta just before basal angle in marginal channel; elytra oval, deeply striate; interstices convex, third interstice 3-punctate on apical two-thirds, humeral angles rounded. Black; elytra in ♂ subviridescent on apical and lateral declivities; legs piceous, tibiae, tarsi and antennæ reddish-piceous.

Head convex; eyes round, prominent. Prothorax a little broader than long (3.5×3.7 mm.), lightly convex, widest before middle; sides lightly rounded, obliquely narrowed to base; apex truncate (2.5 mm.); anterior angles subprominent; base narrower than apex (2.3 mm.), sloping forward on each side; basal angles obtuse but marked; lateral border narrow, subsinuate just before base; median line well marked; lateral basal impressions wide, elongate, rather deep; space between them convex. Elytra oval (8×4.9 mm.), convex; apical sinuosities distinct, wide; basal and lateral borders meeting at humeral angles without interruption; eighth interstice rather narrow, but wider than ninth; tenth interstice shortly developed before apical sinuosities. Intercostal declivity of prosternum rounded, of mesosternum decidedly concave. Length 13, breadth 4.9 mm.

Hab.—N.S.W.: Mount Kosciusko (Colls. Carter and Sloane).

Taken by Mr. H. J. Carter, to whose good nature I owe two specimens (♂♀). It has a considerable resemblance to *N. howitti* Sl., but differs by head smaller, less convex; prothorax narrower, particularly at base, more convex, not depressed between lateral basal impressions, lateral border narrower, especially near basal angles; intercostal declivity of mesosternum decidedly concave. Its position in the genus is beside *N. muelleri*

Sl., from which it is readily distinguished by smaller size, narrower form; head smaller; eyes more roundly prominent; prothorax more narrowed to base, border subsinuate just before basal angles and continuing on to base at each side; legs darker; elytra with a subvirescent tinge in ♂, &c.

NOTONOMUS EQUALIS, n.sp.

Elongate-oval, convex. Prothorax subquadrate, posterior angles wide, hardly marked; elytra oval, strongly striate, humeral angles rounded (but basal border decidedly raised above lateral border at point of junction), interstices convex, third 4-punctate. Black, nitid; prothorax becoming metallic-green towards sides and across apex.

♂. Head moderate (3.3 mm. across eyes); eyes protuberant, deeply inclosed in large orbits posteriorly. Prothorax broader than long (4.5 × 4.9 mm.), widest a little before middle, very lightly narrowed to base; apex and base of equal width (3.6 mm.); sides lightly rounded; basal angles widely obtuse, marked by the posterior marginal seta on border; lateral border narrow, passing round basal angles on to sides of base; median line strongly impressed; lateral basal impressions wide, deep. Elytra oval (9.2 × 5.5 mm.), convex; apex widely sinuate on each side; tenth interstice short, well developed towards apex; interstices convex, subcarinate on apical declivity, eighth wider than ninth on basal half. Intercostal declivity of prosternum rounded in middle, of mesosternum widely and very lightly concave. Length 16-18, breadth 5.5-6.3 mm.

Hab.—N.S.W.: Verona (Colls. Sloane and Taylor).

Given to me by Mr. F. H. Taylor of Sydney as coming from Verona in the Bega district of N. S. Wales. It has the facies of *N. spenceri*, but is allied to *N. macoyi* Sl.,* from which it differs by colour not wholly black; prothorax more convex, more evenly

* An error occurs in my description of *N. macoyi* where the size of the head is given as "4.1 mm. across eyes"; it should be 3.1 mm. from a remeasurement of the type still in my possession.—T.G.S.

rounded on sides, less strongly narrowed to base, posterior angles wider and less marked; elytra with basal border more decidedly raised above lateral border at shoulders, inner interstices more raised and narrower at apex; legs black, &c.

NOTONOMUS VIOLACEUS Castelnau.

Trigonotoma violacea Cast., Etud. Ent. 1834, p.76; *Notonomus fletcheri* Sl., Proc. Linn. Soc. N. S. Wales, 1902, xxvii. p.277.

M. Petri Semenow of St. Petersburg has communicated to me a MS. description of *Trigonotoma violacea* Cast., by the late M. Tschitschérine, from which I have been able to determine it without doubt as the Sydney form of *N. fletcheri* Sl. M. Tschitschérine's note indicated that one of the specimens before him (belonging to the Paris Museum) was ticketed "Sydney." My description of *N. fletcheri* was founded on the form found at Springwood, which has the head and prothorax of a cupreous colour, elytra with a dark cupreous tinge. I believe that it will be found advantageous for collectors to retain this name for the mountain form or variety of *N. violaceus* Cast.

NOTONOMUS JOHNSTONI, n.sp.

♀. Elongate-oval. Prothorax subcordate, posterior angles not marked, posterior marginal seta distant from base; elytra oval, deeply striate; interstices convex, third 3-punctate, eighth narrow. Black with a very obscure bronze tint on elytra.

Head rather large (3.3 across eyes), oval, convex; eyes reniform, subprominent. Prothorax broader than long (4 × 4.4 mm.), widest before middle, narrower at base (2.7 mm.) than at apex (3.3 mm.); sides rounded, roundly-obliquely narrowed to base; apex truncate; basal angles not marked, very near peduncle; lateral border narrow, very narrow behind posterior marginal puncture; median line well marked; lateral basal impressions near basal angles, shallow, wide. Elytra oval (9.5 × 5.5 mm.), convex; basal and lateral borders meeting without interruption at humeral angles; apex widely rounded with a light wide

sinuosity on each side. Intercoxal declivity of prosternum rounded in middle, of mesosternum flat. Length 16·5, breadth 5·5 mm.

Hab.—N.S.W.: Barrington River (Colls. Sloane and Taylor; taken by Mr. S. J. Johnston).

I owe a specimen of this species to the kindness of Mr. F. H. Taylor of Sydney. It is most nearly allied to *N. excisipennis* Sl., but is differentiated by colour; elytra not deeply sinuate on each side of apex; posterior marginal seta of prothorax more distant from base, &c. The convex narrow eighth interstice is not wider than ninth, except just near the base, but it is not so linear as in *N. excisipennis*. *N. johnstoni* has almost exactly the facies of *N. scotti* Sl., from which it may be distinguished at once by the narrower eighth interstice, posterior marginal seta of prothorax 0·75 mm. from basal angle, not at basal angle, &c.

NOTONOMUS SCOTTI, n.sp.

N. kingi Sl. (not Chaudoir), Proc. Linn. Soc. N.S. Wales, 1902, xxvii. p.286.

I have no doubt but that the late M. Tschitschérine was right in considering *N. excisipennis* Sl., as synonymous with *N. kingi* Chaud.,* specimens of which he saw in the Paris Museum; this leaves the species which I have regarded as *N. kingi* without a name; *N. scotti* is now proposed to replace *N. kingi* Sl., my description of which is sufficient for purposes of recognition. It seems fitting to associate this species with the name of the late A. W. Scott, the well known naturalist, formerly resident at Ash Island, where this species is plentiful.

NOTONOMUS SÆPISTRIATUS, n.sp.

Robust, oval; elytra with twelve interstices. Upper surface bronzy, submetallic, brighter towards sides of prothorax and elytra; under surface and legs black, or piceous-black.

* It is doubtful whether Chaudoir considered he was redescribing *Pæcilus kingi* W. S. Macleay, or not; but I believe not. If *P. kingi* W. S. Macleay, be taken to be a *Notonomus*, then *N. kingi* Chaud., will be a *nom. præoc.* and *N. excisipennis* must stand; for this reason I do not propose to replace *N. excisipennis* Sl., by *N. kingi* Chaud.

Head large (3·3 mm. across eyes), strongly bi-impressed between antennæ. Prothorax transverse (3·8 × 5 mm.), wider at base (4 mm.) than at apex (3·4 mm.), depressed; sides arcuate, shortly subsinuate just before base; basal angles subrectangular, obtuse at summit; border narrow towards apex, wide towards base; posterior marginal puncture on border at basal angle; median line strongly impressed; lateral basal impressions short, foveiform, joining marginal channel by a narrow impression posteriorly. Elytra truncate-oval (9 × 5·6 mm.), deeply striate; twelve convex more or less undulate interstices on each elytron, first bearing a short deep striole at base, second catenulate on apical declivity, third bipunctate on apical half, costiform behind second puncture, eleventh very narrow, seriate-punctate, twelfth linear, extending forward for half the length of elytra; basal border raised and obtusely dentate at humeral angles. Intercostal declivity of prosternum flat, of mesosternum wide, not concave. Ventral segments nitid, punctate laterally. Length 14·5-16·5, breadth 5·1-5·6 mm.

Hab.—Q. : Atherton.

Two specimens (♂♀) of this remarkable species occurred to me in dense scrub at Atherton on the upper waters of the Barron River, North Queensland, in June, 1906. Its position is near *N. australasiæ* Dej., though probably it has more affinity to *N. opacistriatus* Sl., than to any other described species. The remarkable interstitial sculpture of the elytra differentiates this species from all others hitherto described. If the interstices at the apex are counted, ten will be found (ninth seriate-punctate), which is the normal number in *Notonomus*, but towards the base there are twelve (eleventh seriate-punctate); the two extra interstices result from the seventh interstice branching into three interstices of normal width a little before the apex.

NOTONOMUS KINGI W. S. Macleay.

Pæcilus kingi W. S. Macleay, King's Survey, 1827, ii. p.438.

The description of *Pæcilus kingi* W. S. Macleay, is brief and vague in the extreme, not even the size being given, so that it

is impossible to know from it even the genus to which it should be referred; its identification would be absolutely impossible were it not that Castelnau in his "Histoire Naturelle des Insectes Coléoptères," I. (p.105), supplies a clue when he says of his *Pæcilus marginatus* (= *Notonomus marginatus*) at the end of the description:—"Il est voisin du *P. Kingii* Macleay." If we accept this clue it appears to me that we must consider *P. kingi* W. S. Macleay, to be a species of *Notonomus*, and judging from the description it should be, in all probability, the species which Chaudoir afterwards named *N. incrassatus*, though I do not wish to assume that this suggestion of mine finally settles the question that these two names are synonyms, but it will serve to keep the subject before the minds of other investigators.

NOTONOMUS MINIMUS, n.sp.

Elliptical. Prothorax cordate, posterior marginal seta on border at basal angle; elytra strongly striate, basal border dentate at shoulders, third interstice bipunctate, eighth interstice narrower than ninth; intercoxal declivity of prosternum flat, of mesosternum wide, not convex; tarsi with onychium glabrous beneath. Black, legs and antennæ piceous-red.

Head oval, convex (1.8 mm. across eyes), smooth, very feebly bi-impressed between antennæ; eyes (with orbits) reniform, rather prominent. Prothorax convex, cordate, broader than long (2.3 × 2.65 mm.), widest before middle; sides lightly rounded, shortly sinuate before base; apex (1.8 mm) narrower than base, (2.15 mm.); basal angles rectangular with summit obtuse; lateral border narrow, reflexed; median line deeply marked, not reaching base; lateral basal impressions deep, narrow. Elytra oval (5.2 × 3.3 mm.), lightly and evenly rounded on sides, narrowed to base; apex obsoletely sinuate on each side; striæ deep; interstices convex, eighth narrow (narrower than ninth), tenth short (only noticeable just before lateral apical sinuosities). Length 9, breadth 3.3 mm.

Hab.—Vict.: Bright (C. French, Junr.; Coll. Sloane; two specimens).

Very distinct, being by far the smallest species of the genus; I have seen no other species of *Notonomus* less than 12 mm. in length; it has the facies of a small specimen of *Rhytisternus miser* Chaud. According to the classification adopted in my "Revision" (1902) its place is next *N. incrassatus* Chaud.

NOTONOMUS AUSTRALIS Castelnau.

Trigonotoma australis Castelnau, Hist. Nat. Ins. i. p. 120 (1840).

I believe that *Trigonotoma australis* Cast., (which is not indexed in Masters' Catalogue; nor have I found it in Gemminger & Harold's Catalogue) is a species of *Notonomus*, and that the species afterwards described by Chaudoir as *N. aneomicans* is conspecific with it. The only discrepancy would be that Castelnau described the elytra of *T. australis* as having three punctures on the third stria, whereas in *N. aneomicans* there are four or five; but Castelnau had formerly (1834) described *N. (Trigonotoma) violaceus* as having two punctures on the third interstice, though in reality there are three or four, so that it is evident he did not take care to be thoroughly accurate in this matter. It might be thought that *T. australis* Cast., was *N. colossus* Sl., but Castelnau's statement *under surface and legs black* applies to *N. aneomicans* rather than to *N. colossus*, the latter having the legs piceous with the tarsi reddish. Though I hold the view that *Notonomus australis* Cast., will likely ultimately supplant *N. aneomicans* Chaud., yet the species is a variable one with a wide distribution, which will probably be found to include several varieties entitled to names; so that I do not feel certain that the name *N. aneomicans*, which I consider to belong to the form found in South Queensland, may not be capable of retention, at least for a variety.

Castelnau's "Historie Naturelle des Insectes Coléop." is a work hardly to be seen in Australia; therefore, that other students may be able to weigh the evidence, I reproduce the description:—

"*Trigonotoma australis*. Long. 9 lig. Larg. 3 lig.—D'un noir luisant; tête un peu bronzée, avec deux impressions entre les

yeux; corselet en coeur, rebordé latéralement, avec une ligne longitudinale au milieu, et deux traits au bord postérieur, d'un vert brillant, un peu bronzé au milieu, elytrées bronzées, ovales, striées, avec trois points sur la troisième strie, le bord extérieur d'un vert éclatant; dessous du corps et pattes noirs. Nouvelle-Hollande. Collection de M. Gory."

Genus SETALIMORPHUS.

SETALIMORPHUS NANUS Sloane.

Proc. Linn. Soc. N. S. Wales (2) ix., 1894, p.435; *Phænaulax stenomorpha* Tschitschérine, Hor. Soc. Ent. Ross. xxxii. 1898, p.167.

The late M. Tschitschérine had recognised his genus *Phænaulax* as synonymous with *Setalimorphus*,* and a comparison of specimens of *S. nanus* with the description of *Ph. stenomorpha* convinces me that they are the same species. I am not, however, convinced that *Phænaulax* is absolutely congeneric with *Setalimorphus*; points of difference being the presence of a setigerous puncture at the basal angles of the prothorax, and two foveiform punctures on the apical ventral segment in *S. punctiventris* Sl. (the type-species of the genus), characters which are not found in *S. nanus* Sl. My present conclusion is that while Tschitschérine's genus *Phænaulax* is likely to obtain ultimate recognition as valid, the species on which it is founded must be considered a synonym of *Setalimorphus nanus* Sl.

RHYTISTERNUS LEVIDORSIS Tschitschérine.

Hor. Soc. Ent. Ross. xxv. 1891, p.169.

In these Proceedings (1894 p.410) I published the opinion that *Rhytisternus levidorsis* Tschits., was synonymous with *R. (Pæcilus) laevis* Macl., but having recognised a species sent to me by Mr. F. P. Dodd from Townsville, Queensland, as *R. levidorsis*, I have no doubt but that it is a good species, thoroughly distinct from *R. laevis*. In *R. levidorsis* the posterior angles of the pro-

* Hor. Soc. Ent. Ross. xxxv. p.508 (1902).

thorax are described as more rounded at the summit than in *R. liopleurus* Chaud., whereas in *R. lavis* these angles are more rectangular and marked than in *R. liopleurus*.

LOXOGENIUS, n.gen.

Mentum short; sinus shallow, wide, bordered and roundly advanced at bottom; lobes obtusely rounded at apex, oblique on inner side. *Submentum* raised above mentum, with about six setigerous punctures on each side; a wide deep concavity behind middle of submentum. *Mouth-parts* similar to those of *Castelnaudia*; labial palpi with penultimate joint 2-setose. *Labrum* prominent, 6-setose, lightly and widely emarginate. *Paragene** with upper margin forming a border, a deep elongate subfoveiform depression between this upper border and a median ridge. *Prothorax* opaque, subcordate; lateral channel and border wide; a lateral seta on each margin at widest part; two lateral basal setae on each side behind posterior sinuosity; two setae on margin at each anterior angle. *Elytra* convex, a little narrowed to base, opaque; ninth interstice and lateral margin nitid; basal border nitid, with a strong obtuse tooth at each humeral angle closing the space between the second carina and the lateral margin; third, fifth and seventh interstices strongly carinate. *Prosternum* with a median channel extending backwards from about anterior third almost to base; intercoxal part bordered on base and bearing three or four setae. *Mesosternum* with intercoxal declivity glabrous. *Metasternum* glabrous; episterna concave, short, but together with epimera, longer than broad. *Ventral segments* transversely sulcate and bordered posteriorly; apical segment in ♂ with two, in ♀ with four, setigerous punctures. *Facies* of *Castelnaudia*. Apterous. ♂. *Anterior tarsi* with three basal joints dilatate and with squamulae beneath.

Type.—*Homalosoma opacipenne* Macleay. Length 20, prothorax 5 × 6, elytra 10·7 × 6·3 mm. Several specimens sent to

* Chaudoir gave the name *paragena* to the space between the subocular antennal scrobe and the buccal fissure.

me by Mr. F. P. Dodd from Kuranda, Queensland, have been compared with Macleay's type in the Macleay Museum.

This species evidently never came under the observation of the late M. Tschitschérine;* I regard it as a primitive form apparently more allied to Tschitschérine's genus *Liopasa*† than to any other described form.

Genus SETALIS.

SETALIS RUBRIPES, n.sp.

Oblong, oval, robust. Head small (1.4 mm. across eyes), front strongly bi-impressed; eyes hemispherical, distant from buccal fissure beneath; prothorax convex, deeply bi-impressed on each side of base; two marginal setæ on each side, anterior seta at anterior third, posterior near basal angle at inner side of lateral channel; elytra convex, strongly crenulate-striate, without scutellar striole, third interstice impunctate. Black; legs, antennæ, and mouth-parts red.

Prothorax subcordate (1.8 × 2.3 mm.), widest about middle, wider at base (2 mm.) than at apex (1.4 mm.); sides arcuate, lightly narrowed to base; apex lightly emarginate, angles obtuse; base emarginate in middle; basal angles subrectangular (obtuse but marked); lateral border narrow; marginal channel narrow, ending abruptly just before base; median line lightly marked on disc; inner lateral basal impression deep, short, sulciform, not reaching base; inner basal impression forming a shallow oblong fovea. Elytra oval (4 × 2.7 mm.), convex, declivous to base; striæ deep, crenulate; interstices convex, sixth and ninth contiguous near apex, seventh wide and well developed on basal two-thirds, eighth only developed (and linear) on basal third, ninth seriate-punctate; basal border forming a short strong tooth at humeral angles; apex sinuate on each side. Metasternum very short and bearing about three fine punctures on each side

* *Vide supra* under *Castelnaudia* sp. p. 360.

† Mr. H. J. Carter recently found *Liopasa crepera* Tschitsch., on the Tweed River, N.S.W.; its exact habitat has not been recorded before. It resembles *Notonomus angustibasis* Sl., in facies and striation of elytra.

between intermediate and posterior coxæ, episterna short. Basal ventral segments bearing some punctures, three apical segments deeply transversely sulcate and with a deep fovea on each side, apical segment with two foveiform punctures. Length 7, breadth 2.7 mm.

Hab.—Q.: Atherton. One specimen occurred to me in thick scrub in June, 1906.

Very different from *S. niger* Cast., (the other species of the genus *Setalis*) from which it is easily distinguished by its smaller size, narrower and more convex form, very differently shaped prothorax, elytra with striæ crenulate, &c. It is remarkable that the same unusual conformation of the lateral elytral interstices should occur in two such very different species as *S. niger* and *S. rubripes*. In my description of *Loxogmus obscurus* (= *S. niger* Cast.), I have said the *eighth* elytral interstice is punctate, having overlooked the true eighth interstice, which only shows in a linear form near the base. In *S. niger* the seventh interstice also disappears about the posterior third, so that the sixth and ninth interstices become contiguous near the apex as in *S. rubripes*.

COSMODISCUS, n.gen.

Mentum not deeply excised; lobes obtuse at apex; sinus oblique on sides, a short wide triangular median tooth at bottom. *Palpi* stout: *labial* with penultimate joint bisetose; apical joint short, hardly longer than penultimate, compressed, truncate: *maxillary* with apical joint short, hardly longer than penultimate, obtuse at apex. *Labrum* shagreened, truncate, sexsetose. *Mandibles* short, without a seta in outer groove. *Clypeus* bisetose. *Head* small; front deeply and shortly bi-impressed: *eyes* hemispherical, narrowly separated from buccal fissure beneath. *Antennæ* short, moniliform, lightly incrassate; joints 1-3 glabrous, 6-11 compressed, first large, about as long as second and third together, second shortest. *Prothorax* widely transverse, wider at base (2.7 mm.) than at apex (2 mm.); basal angles obtuse; apical border entire; two marginal setæ on each side, anterior just before middle, posterior at basal angle. *Elytra* bordered on base, not dentate

at humeral angles; apex sinuate and with margin interrupted by an internal plica on each side; interstices convex, without a basal striole on first or second, third impunctate. *Prosternum* lævigatae, bordered between coxæ; episterna finely shagreened. *Mesosternal episterna* densely punctate. *Metasternum* on each side, and episterna densely punctate. *Ventral segments* not transversely sulcate, densely punctate, except in middle between ambulatorial setæ. *Legs* short: femora short; anterior tibiæ with apex wide, rounded and spinose externally; tarsi short, glabrous on upper surface, onychium glabrous beneath, ungues simple; anterior tarsi with first joint about as long as three succeeding joints together, strongly produced at apex internally in an elongate spiniform process, joints 2-4 successively shorter, second with apex sharply produced internally; posterior tarsi slender, first joint about as long as three succeeding joints together, these successively shorter, fourth very small; posterior trochanters with a setigerous puncture near base.

The position of this genus is evidently near *Stomonaxus*, which is unknown to me in nature; it differs from Motschulsky's description of the genus *Stomonaxus* by mandibles short, first joint of antennæ longer than third; I believe, too, that the form of the prothorax (shaped somewhat like that of *Ephnidius*, lateral basal impressions feebly marked, base wide and obtusely angled) is altogether different from the form of the prothorax in *Stomonaxus*.

COSMODISCUS RUBRIPICTUS, n.sp.

Piceous-black; prothorax with border testaceous; elytra with ferruginous pattern (ferruginous pattern reaching the fourth interstice at base, spreading over the three outer interstices on the middle of the sides, sending off a wide oblique uneven fasciaform branch inwards on each elytron to join the corresponding branch of the other elytron at the suture about apical third), lateral channel testaceous backwards to apical sinuosity, inflexed margin ferruginous, infusate opposite metepisterna; coxæ, middle of metasternum, mesosternum, prothorax, and under parts of head

ferruginous; femora and posterior trochanters testaceous; tibiæ and tarsi reddish-piceous; antennæ ferruginous, paler near base, infusate towards apex. Prothorax transverse (1.7×3 mm.), depressed on disc and across base, lightly declivous to sides on anterior two-thirds; apex lightly emarginate; anterior angles obtuse, not prominent; sides lightly rounded; basal angles obtuse; base lightly sinuate-truncate in middle between lateral basal impressions, sinuate on each side; border entire on apex, rather wide on sides, obsolete just before basal angles; median line hardly marked; lateral basal impressions linear, short, shallow, punctulate. Elytra widely ovate (4.8×3.7 mm.); shoulders rounded; interstices convex, narrower and more raised at apex. Length 7.7, breadth 3.7 mm.

Hab.—Q.: Kuranda (Dodd; Coll. Sloane; unique).

Tribe LEBIINI.

Genus PHLÆODROMIUS.

PHLÆODROMIUS PLAGIATUS Macleay.

This species, described from Yule Island, New Guinea, is here recorded from Australia for the first time. It is at once distinguished from *Ph. piceus* Macl., the only other species of the genus, by the large black patch common to both elytra which extends from about the basal third to the apical fifth and reaches laterally to the ninth interstice, but not to the border. Length 9, proth. 1.5×2 , el. 5×3.5 mm.

Hab.—Q.: Townsville and Kuranda (Dodd; Coll. Sloane).

Note.—In the genus *Phlæodromius* the mesosternum is small and narrow between the intermediate coxæ, and the metasternum meets it by a very narrow intercoxal prolongation; the tarsi have all the joints clothed beneath with chestnut-coloured hairpads; in the male two narrow rows of paler squamulæ are noticeable in the middle of joints 1-3 of the anterior tarsi, and the third joint of the intermediate tarsi; the third interstice of the elytra is 3-punctate, the anterior puncture is near the base beside the third stria, the second puncture a little before the middle near

the third stria, the third puncture about the apical fifth near the second stria. The ungues are strongly pectinate.

SAROTHROCREPIS MUCRONATUS, n.sp.

Head large (2 mm. across eyes); prothorax transverse, base wide, lobate; elytra wide, strongly striate, third interstice bipunctate near course of third stria, each elytron with a short spiniform process at outer and inner angle of apical truncature; legs as in *Sarothrocrepis*; tarsi with penultimate joint deeply emarginate, ungues strongly pectinate. Dark piceous; prothorax with explanate margins testaceous; elytra with reflexed border and marginal channel ferruginous; under surface of prothorax, mesothorax, metathorax, inflexed margins of elytra and femora pale testaceous; abdomen piceous, lighter-coloured near posterior coxæ; tarsi, antennæ, and palpi ferruginous.

Head convex between eyes, not narrowed behind eyes; upper surface distinctly punctate; front and clypeus rather rugulose; eyes very large and prominent. Antennæ slender, inserted close to eyes, three basal joints glabrous. Prothorax transverse (1.85×2.8 mm.); apex truncate, same width as neck; sides roundly ampliate from apex without marked anterior angles, attaining greatest width and rounded about middle, very little (roundly) narrowed to base; basal angles strongly marked, rectangular but not acute, bearing a setigerous puncture; disc convex; lateral margins explanate, very wide at base, becoming narrow near apex; base truncate on each side of peduncle (behind testaceous explanate margin), middle rather strongly produced backwards and forming a well marked wide lobe; sinuosity on each side of basal lobe wide but decidedly marked. Elytra wide (6.5×4.5 mm.), widest behind middle, convex; base widely rounded on each side of peduncle; striæ strongly impressed, finely crenulate at bottom, seventh ending near suture in an ocellate setigerous puncture opposite apical extremity of third interstice; interstices convex, four inner ones not convex—except towards base, first narrow, ending at apex in a short mucro, becoming wider and bearing an elongate strongly im-

pressed striole on basal fifth; interstices 5-7 strongly convex, ninth wide (wider than eighth), seriate-punctate; space between eighth stria and margin very wide near apex; border narrowly reflexed on sides, feeble on base near scutellum; apical truncature sloping lightly obliquely forward from suture to extremity of eighth interstice, then curving very lightly backwards to the sharply marked external angle. Length 10·5, breadth 4·5 mm.

Hab.—Q.: Townsville (Dodd).

I have placed this species in *Sarothrocrepis*, at least provisionally, on account of its evident affinities to that genus, though it differs from all the other species by the punctures of the third elytral interstice; the apical truncature of each elytron dentate at outer and inner angle; the elytra with deeply impressed striæ; interstices 4-6 strongly convex near base, ninth as wide as eighth; the abdomen setigero-punctate. It is also isolated by its dark colour (elytra not widely margined with yellow).

Genus EULEBIA.

EULEBIA BICOLOR, n.sp.

Testaceous; elytra with a very broad dark blue fascia (almost two-thirds of elytra) across middle from side to side; antennæ after third joint infuscate.

Head nitid, minutely punctulate; eyes black, very prominent, globular. Prothorax transverse, a little wider than head (1×1.5 mm.); sides roundly narrowed anteriorly, oblique posteriorly; base much wider than apex, truncate on each side of peduncle, median part produced backwards, rounded; anterior angles widely rounded; basal angles subrectangular, obtuse at summit; lateral margins explanate, very wide posteriorly; two marginal setigerous punctures on each side, anterior at widest part, posterior on border at basal angle. Elytra wide (4×2.9 mm.), finely striate; interstices a little convex, shagreened, minutely punctulate, first with a fine striole at base, third 3-punctate, anterior puncture just outside anterior margin of blue part, second at its posterior margin, third at apex of interstice; blue

area having anterior margin a little sinuate, the testaceous colour of the base extending back a little along the fourth interstice; anterior margin of apical testaceous area extending forward from outer apical angle to second puncture of third interstice, then running back a little towards suture. Ungues serrate. Length 5.3, breadth 2.9 mm.

Hab.—Q. : Kuranda (Dodd ; “on flowers of Eucalyptus” ; Coll. Sloane).

The three known species of *Eulebia* are before me; they may be distinguished from one another as under :—

Elytra bicolorous on disc. Testaceous with four inner interstices black on disc.....	<i>E. plagiata</i> Macl.
Elytra bicolorous on disc. Blue with base (widely) and apex testaceous.....	<i>E. bicolor</i> Sl.
Elytra unicolorous—brownish.....	<i>E. picipennis</i> Macl.

Note.—*Eulebia* is closely allied to *Sarothrocrepis*; in fact it seems to me rather a section of *Sarothrocrepis* than a distinct genus.

Genus COPTODERA.

Eucalyptocola Macleay.

The three Australian species of *Coptodera* may be tabulated as under :—

Prothorax with lateral margins wide.

Elytra piceous-black, with a narrow zigzag, or V-shaped ferruginous fascia on posterior half, sometimes with also a faint discal macula on each elytron in front of the fascia.....

C. australis Chaud.

Elytra piceous-black, with an intricate pattern in the form of two broken zigzag transverse testaceous fasciæ

C. mastersi Macl.

Prothorax with lateral margins narrow.....

C. marcida Blackb.

COPTODERA AUSTRALIS Chaudoir.

Ann. Soc. Ent. Belg. xii., 1869, p.184. *Philophleus dubius* Macl., Trans. Ent. Soc. N. S. Wales, ii., 1871, p.90.

I have determined *Philophleus dubius* Macl., by examination of the type in the Australian Museum, and, after comparing

specimens in my possession with the description of *C. australis* Chaud., feel no doubt of the identity of these species. *Philophlæus dubius* Macl., is certainly congeneric with *C. elegantula* Schmidt-Goebel, from Burma, to which it is closely allied.

Hab.—Eastern Australia.—Q.: Atherton (Sloane); Kuranda (Dodd); Gayndah (Masters). — N. S. Wales: Tweed River (Carter); Richmond River (Helms).

COPTODERA MASTERSI Macleay.

Eucalyptocola mastersi. Trans. Ent. Soc. N. S. Wales, ii. 1871, p.91.

This species is known to me, and is congeneric with *C. australis* Chaud. Macleay was in error in describing his genus *Eucalyptocola* as having the mentum with a "large acute median tooth." I have dissected the mouth-parts of *Eucalyptocola mastersi* Macl., and found the mentum with the sinus edentate. *C. mastersi* must be very near *Coptodera (Rhinocheila) levrati* Perroud, from New Caledonia.

Hab.—Q.: Kuranda (Dodd); Gayndah (Masters); Brisbane (Hacker).

COPTODERA MARCIDA Blackburn.

Eucalyptocola marcida Trans. Roy. Soc. South Aust. 1903, p.91.

This species is unknown to me in nature. I have placed it in the table above by the aid of the description, which leaves us in some doubt as to whether it is actually congeneric with *C. australis* Chaud., or not.

Hab.—Vict.: Glenelg River (Blackburn).

Genus MOCTHERUS.

MOCTHERUS MACLEAYI, n.sp.

Oval; elytra strongly and simply striate; prothorax deeply emarginate at apex, widely margined on sides, base truncate; mentum edentate. Black; elytra with four round testaceous spots, anterior near each shoulder on interstices 4-8, posterior at apical fourth on interstices 3-6; under surface piceous; legs and middle of abdomen brownish.

Head convex (1.1 mm. across eyes), shagreened; front not impressed; eyes convex, prominent, coarsely faceted. Prothorax wider than head, transverse (0.9 × 1.5 mm.), widest and subangulate in middle; disc convex, canaliculate; sides obliquely narrowed to apex and base, a little more strongly and roundly so to apex; anterior margin finely bordered; anterior angles obtuse, rather distant from head; base truncate, slightly oblique on sides; basal angles obtuse but marked; lateral margins reflexed, explanate (widely so posteriorly), bearing two setæ (anterior at middle, posterior at basal angle); basal area depressed. Elytra widely ovate (3.2 × 2.35 mm.), lightly convex; humeral angles widely rounded; apex obliquely truncate; external angle widely rounded, sutural angle decidedly marked; interstices lævigata, subconvex, first with a short striole at base, third with a fine puncture on subapical macula, ninth not narrower than eighth, seriate-punctate; marginal channel wide, depressed; border extending from peduncle to apical sutural angle. Mesosternum with intercoxal part small, narrow; metasternum meeting mesosternum in a narrow point between the coxæ. Tarsi with penultimate joint entire. Length 4.5-5, breadth 2.35 mm.

Hab. — Q.: Cairns District (Froggatt); Normanby River (Sloane).

I have been able at the Macleay Museum to compare specimens brought from the Cairns District by Mr. Froggatt in 1887 with *M. tetraspilotus* W. S. Macleay, and have found that *M. macleayi* differs by size smaller; prothorax shorter, wider, sides not sinuate posteriorly; head less rugulose, &c. Several specimens occurred to me on the Upper Normanby River, 40 miles south-west of Cooktown, in June, 1906, beneath a log upon the ground in scrub. The genus *Motherus* has not been recorded previously from Australia.

STRICKLANDIA NIGRA, n.sp.

Depressed; head large, eyes prominent; prothorax deeply emarginate at apex, lateral margins explanate; elytra much wider than prothorax, striate, interstices subcostate, a sharp spine at inner and outer apical angles of each elytron. Black;

under surface piceous; tarsi, palpi, and six apical joints of antennæ reddish, four basal joints of antennæ piceous.

Head large (2.5 mm. across eyes), strongly obliquely and evenly narrowed behind eyes, subconvex between eyes, widely and feebly impressed on each side between antennæ; eyes large, hemispherical, not inclosed at base, very close to buccal fissure beneath; clypeus truncate; labrum long, almost covering mandibles, roundly truncate and 6-setose at apex (the lateral setæ long). Mentum with a short, widely obtuse prominence in middle of sinus. Labial palpi with apical joint elongate; penultimate hardly shorter, bisetose in front. Antennæ slender; basal condyle exposed. Prothorax broader than long (1.8 [2.2 at sides] \times 2.85 mm.), widest and subangulate just before middle; sides narrowed to apex in an oblique curve, more lightly and subsinuately narrowed to base; apex deeply and roundly emarginate; anterior angles prominent, obtuse; base truncate; basal angles wide; disc canaliculate, transversely striolate; margins explanate, widely reflexed, widest at basal angles; a wide round depression near each basal angle, these depressions connected by a rather wide transverse impression; a setigerous puncture on edge of explanate border at basal angle, and another at widest part of prothorax on each side; a few fine setæ on margin near each anterior angle. Elytra lightly convex, shortly ovate (6.5 \times 4.8 mm.), about twice as wide at base as the base of the prothorax; humeral angles widely rounded; apical truncature of each elytron obliquely arcuate, a short acute spine at outer angle; a long acute spine at apex of second interstice; striæ finely punctate; interstices convex or subcostate, with a row of minute punctures down middle, third with two distinct setigerous punctures about apical third, ninth seriate-punctate, narrow and catenulate near shoulders; border narrowly reflexed on sides, reaching peduncle; inflexed margin wide near base. Prosternum with intercoxal part narrow, bordered on each side; mesosternum narrow between coxæ; metasternum meeting mesosternum between middle coxæ in a sharp point. Tarsi long, slender; three basal joints of anterior in male slightly inflated; ungues finely pectinate near base. Length 11, breadth 4.8 mm.

Hab.—Q.: Kuranda (Dodd; March and April).

I compared this species with the type of *S. pericalloides* Macl., in the Australian Museum and found it thoroughly distinct. It differs decidedly from *S. pericalloides* by the shape of the prothorax, which has the sides far less ampliate at middle, much less strongly sinuate posteriorly, and without the six or seven long marginal setæ of the anterior half; the anterior angles triangular, not obtusely rounded, &c. The New Guinea genus *Stricklandia* is now recorded for the first time from the Australian mainland.

Genus SCOPODES.

SCOPODES CYANEUS, n.sp.

Upper surface bluish; elytra violaceous; legs testaceous. Head wider than prothorax (1.2 mm. across eyes), smooth, nitid; eyes large and prominent. Prothorax a little broader than long (0.75 × 0.9 mm.), convex, nitid, widest at anterior marginal seta (this on a sharp triangular process), narrowed and transversely impressed behind posterior marginal seta (this on a small angulate prominence a little before the base); lateral border reflexed between marginal setæ. Elytra oval (2.3 × 1.6 mm.), punctate-striate; interstices depressed, third without distinct discoidal punctures.* Length 4, breadth 1.6 mm.

Hab.—Q.: Kuranda (Dodd).

A distinct species. Its colour, the striæ of the elytra formed of rows of strong punctures, and the third interstice without foveiform punctures, are features that differentiate it from all the other Australian species. According to the table of the Australian species of Scopodes given by me in these Proceedings, (1903, p.637), it would be placed nearest *S. aterrimus* Chaud., and *S. sydneyensis* Sl., but it is not at all closely allied to these species.

SCOPODES ANGULICOLLIS Macleay.

Trans. Ent. Soc. N. S. Wales, ii., 1871, p.92; *S. rimosicollis* Sloane, Proc. Linn. Soc. N. S. Wales, 1903, xxviii., p.639.

* In my unique specimen I am able to detect only one fine puncture, almost confused with the punctures of the third stria, placed about the anterior fourth.

I have compared my specimens of *S. rimosicollis* with the type of *S. angulicollis* and found them the same.

Hab.—Q.: Kuranda (Dodd); Gayndah (Masters)—N. S. W.: Dunoon (Helms); Illawarra (Carter).

SCOPODES DENTICOLLIS Macleay.

Trans. Ent. Soc. N. S. Wales, i. 1864, p. 112; *S. sexfoveatus* Macleay, Proc. Linn. Soc. N. S. Wales, (2), iii. 1888, p. 456.

I have examined the types of *S. denticollis* and *S. foveatus* in the Macleay Museum, and could find no difference between them.

SCOPODES LAEVIS Macleay.

Trans. Ent. Soc. N. S. Wales, ii. 1871, p. 92.

I have seen the type of *S. laevis* in the Australian Museum, Sydney, and found it allied to *S. denticollis*, Macl. It has all the features necessary to bring it into the same group as *S. denticollis* according to the tabular view of the species I have given in these Proceedings for 1893 (p. 637). I also compared with it *S. sydneyensis* Sl., and considered them distinct.

Genus ECTINOCHILA.

ECTINOCHILA AURATA Macleay.

Scopodes auratus Macleay, Trans. Ent. Soc. N. S. Wales, ii. 1871, p. 92; *Ectinochila tessellata* Chaudoir, Col. Nov. 1883, i. p. 21; *Scopodes fasciolatus* Macleay, Proc. Linn. Soc. N. S. Wales, 1887 (2), ii. p. 219.

I have only recently been able to compare Chaudoir's description of *Ectinochila tessellata* with fresh specimens of *Scopodes auratus* Macl., with the result that I feel no doubt as to their identity. The types of *Scopodes fasciolatus* Macl., are in the Macleay Museum, where are also specimens of *Scopodes auratus* from Gayndah; a recent examination of these convinced me of their identity.

Hab.—Q.: Kuranda (Dodd); Gayndah (Masters); Coomera, south of Brisbane (Sloane; under the bark of a dead sapling; June, 1906).